

BIRDS OBSERVED ON MACKINAC ISLAND, MICHIGAN, DURING THE SUMMERS OF 1889, 1890, AND 1891.

BY STEWART EDWARD WHITE.

THE ISLAND of Mackinac is situated in the straits of the same name between the two peninsulas of Michigan. It is a rocky island surrounded by steep bluffs which recede far enough inland on the southeast side to form a plain of sufficient size to contain the town and a few adjacent meadows. The only cultivated land is at Early's farm, a clearing of about two hundred acres, the major part of which is pasture. The island itself is six miles by three in its widest parts and contains somewhat over twenty-four hundred acres.

It is nearly completely encircled by a belt of evergreens, varying in width from fifty to several hundred feet, while the middle is occupied by a deciduous growth. Of the evergreens the outer edge is composed chiefly of cedars, while the inside contains balsam firs, hemlocks, and tamaracks. In a few places the hemlocks and firs are found scattered over stony ground free from brush. Both red and white pines occur in scattered clumps. Of the deciduous trees the hard maple is by far the most numerous, with many elms, beeches, white birches, and a few oaks, ironwoods, black birches, silver and soft maples. These woods are remarkably free from brush, though this is more than made up for by a large and almost impenetrable thicket of scrub maples, birches, hazels, oaks, hemlocks, and tamaracks. This occupies about two hundred and fifty acres southwest of the centre of the island, and is most fruitful during migrations.

The island does not offer favorable conditions for the occurrence of most water birds. The water being deep and the coast line unbroken, little food and shelter is offered the Ducks; as there is no beach, the shore birds pass by; the absence of swamps precludes the presence of their inhabitants.

Owing probably to the small size of the island, and to its location, bird waves were strongly defined and easily observed, and were made an object of especial study the results of which

were too extensive to admit of treatment here. It might be observed in general, however, that the migrations there, on the 45th parallel, were from seventeen to twenty days earlier than in Kent County (43°).

The following list gives the result of three summers' active field work. My observations extended from July 1 to Sept. 24, 1889, from July 2 to Sept. 26, 1890, and from July 10 to Sept. 18, 1891, during which time I was constantly in the field. I wish to acknowledge assistance from my brother, Mr. T. Gilbert White, especially during my absence of a week in the middle of August, 1890, and for notes by Dr. R. M. Gibbs of Kalamazoo, June 11 and 12, 1885.

Podilymbus podiceps.—Rare. Occasionally observed in the harbor during the middle of September.

Urinator imber.—Rare visitant from Les Cheneaux Islands where they are common. Seen fishing in the harbor or flying by.

Rissa tridactyla.—Rare. A few accompany the large Gulls in their migrations:

Larus marinus.—Very rare migrant.

Larus argentatus smithsonianus.—Common summer visitant and abundant migrant. Said to breed on Bois Blanc Island. In fall they are abundant but very wild. The first migrants arrived about the middle of August.

Larus delawarensis.—Common migrant. First seen about August 15.

Larus philadelphia.—Dr. Gibbs "saw a flock."

Sterna tschegrava.—Thousands of large Terns accompany the Gulls in migration, but are shy. They resemble each other so much that identification on the wing is very uncertain. I repeatedly took this Tern, and should call it common.

Sterna maxima.—I examined several specimens. Rather more rare than *S. tschegrava*.

Sterna hirundo.—A specimen observed by T. G. White, Aug. 28, 1890.

Hydrochelidon nigra surinamensis.—Dr. Gibbs "saw several."

Merganser americanus.—Not uncommon summer resident in the vicinity of Round Island, a small piece of land a mile from Mackinac.

Merganser serrator.—Not uncommon summer resident at Round Island. A set of nine incubated eggs was taken there, July 4, 1891, from a nest of cedar bark on the ground under a spreading branch of a cedar, about fifty feet from the water but within five feet of a stone beach.

Anas boschas.—Rather rare visitant. Seen more often flying by.

Aix sponsa.—A male was seen July 11, 1889, sitting on a horizontal limb over a small pond of water, which was caused by heavy rains.

Charitonetta albeola.—I observed one flock of eight July 3, 1890.

Erismatura rubida.—I examined a single specimen killed by a boy Sept. 3, 1890.

Botaurus lentiginosus.—Rare resident in the marshes near Early's farm and the town. Several observed at various times, and one specimen taken by T. G. White.

Ardea herodias.—Rare summer visitant from Les Cheneaux where it is common.

Rallus virginianus.—Very rare summer resident.

Porzana carolina.—Common summer resident in marshes at Early's.

Fulica americana.—Dr. Gibbs "saw one."

Philohela minor.—Not a common summer resident in dry woodlands. Often flushed from the middle of shaded roads towards evening.

Gallinago delicata.—Rare migrant. I flushed one in a meadow Sept. 17, 1889.

Tringa minutilla.—Rather rare migrant on Round Island.

Ereunetes pusillus.—One specimen taken Sept. 4, 1889.

Totanus solitarius.—In 1890 and 1891 not a rare summer resident. None present in 1889.

Actitis macularia.—Very common summer resident. Feeds on stone spiders.

Ægialitis vocifera.—Dr. Gibbs "saw a pair."

Colinus virginianus.—The usual northern limit of this bird is about the latitude of Petoskey, so the discovery of two July 24, 1890, was somewhat surprising. None were seen before or since. Mr. Early states that they were once common on his farm, but were exterminated by hunters.

Ectopistes migratorius.—A large flock was seen feeding in beech woods August 30, 1889, after which they were frequently seen. About a hundred were observed Sept. 10, and on Sept. 12 the main body departed. But a few individuals were present when I left. None were observed in 1890 or 1891.

Zenaidura macroura.—Rare in summer.

Circus hudsonius.—Common migrant, frequenting the overflowed meadows near Early's farm. First seen Aug. 3; became common Aug. 5; last seen Aug. 22.

Accipiter velox.—Common migrant near Early's farm where it preys on chickens, Flickers, and even ventures to attack the Crows. A fearless bird, permitting close approach. First seen Aug. 8-21; still present when we left the island.

Accipiter cooperi.—Common migrant. Occurs in smaller numbers than *A. velox*. It has about the same dates of arrival and departure.

Accipiter atricapillus.—In 1889 two pairs of this fine bird could be seen on any clear day. They were not given to sailing high in the air as do the Buteos, but swept over the country just above the tops of the trees. In 1890 but one pair was observed, and upon inquiry I found a boy who claimed to have shot a "large white hawk with black on his head; he weighed three pounds." So it is probable that he secured one of this

species. The last pair had disappeared in 1891. My efforts to procure specimens were unavailing, although I saw them almost daily, and with powerful glasses examined them both sailing and perched. I am familiar with the bird, and am sure there can be no mistake in identification.

Buteo borealis.—Rare summer visitant, though at times common when they come over from the mainland to hunt.

Buteo lineatus.—Rare summer resident, and at times a rather common visitor. A pair lived on the island in 1890.

Buteo latissimus.—The only record for this species is one, Sept. 1, 1889.

Haliaeetus leucocephalus.—In 1889 three of these birds, two adults and one young, were seen at various times during the summer. In 1890 only one of the old ones and the young one were observed. The female was shot by a local taxidermist. In 1891 two mature and two young were on the island. These birds are common at Les Cheneaux.

Falco sparverius.—Common migrant. Arrives about the middle of August and remains until the middle of September.

Pandion haliaetus carolinensis.—Rare visitant from the mainland where it is rather common.

Syrnium nebulosum.—I found the remains of one in July, 1889, and saw two Aug. 15, 1890.

[**Nyctala acadica.**—My brother, T. G. White, who knows the bird, writes me of a bird of this species which he saw in captivity at various times during the summer of 1892.]

Coccyzus americanus.—One seen July 6, 1889.

Coccyzus erythrophthalmus.—One specimen taken July 13, 1889. Not uncommon summer resident in 1890 and 1891.

Ceryle alcyon.—Rather rare during 1889. Very common in 1890 and 1891.

Dryobates villosus.—Rare. Seen Aug. 9 and Sept. 6, 1890, and July 28, 1891.

Dryobates pubescens.—Not a Woodpecker is found on the island during the summer, and this is the first species to appear, arriving the last of July.

Sphyrapicus varius.—Rare migrant; a number observed at widely separated intervals.

Ceophloeus pileatus.—Rare, in the high maple woods. Said to be common in winter.

Melanerpes erythrocephalus.—In 1889 a rare migrant; I shot two immature birds Sept. 11 and 14. Not uncommon migrant in 1890 and 1891. Arrives from Sept. 4 to 9.

Colaptes auratus.—Abundant migrant. Arrives July 15-25.

Chordeiles virginianus.—Rare summer resident and common migrant. Becomes common Aug. 12-27. Last seen Sept. 2-5.

Chætura pelagica.—Common summer resident. Last seen Aug. 29-Sept. 2.

Trochilus colubris.—Rare resident. Seen at all times of the summer and in the fall even after most Warblers had departed.

Tyrannus tyrannus.—In 1889 but one pair was observed, but in 1890 and 1891 three pairs were seen, and in 1891 they were quite common. Mig. 10-15; become common Aug. 3-9, and all depart Aug. 26-30.

Sayornis phæbe.—In 1889 a rare summer resident until Aug. 20. In 1890 none were seen. In 1891 one pair observed occasionally. Frequent the scattered woods.

Contopus borealis.—One specimen shot Aug. 15, 1890.

Contopus virens.—Not common as a summer resident, but a common migrant. Frequents the deciduous woods. Becomes common Aug. 7-12. Last seen Sept. 2-10.

Empidonax flaviventris.—Rare migrant; taken Aug. 14 and 30, 1890.

Empidonax acadicus.—Common migrant. I have taken many specimens. Frequents impartially the open woods and high scrub growth. Arrives Aug. 10-16; departs Aug. 31-Sept. 6.

Empidonax pusillus traillii.—Abundant migrant. Arrives Aug. 5-10; departs Sept. 3-10.

Empidonax minimus.—In 1889 this species was observed only as a common migrant, but in 1890 and 1891 a few were found during the summer near Early's farm. In 1889 it was first seen Aug. 3. It becomes common about the last of August and disappears in a few days.

Otocoris alpestris.—Very common about the middle of September. The Indians shoot numbers of them for food under the name of 'Yellowthroat.'

Cyanocitta cristata.—In 1889 and 1891 very common summer resident. Rather more scarce in 1890. Useful as scavengers.

Perisoreus canadensis.—On July 10, 1889, a flock of eight flew over me low down and headed for the Upper Peninsula. I did not see them again, but am certain as to their identity, for I am perfectly familiar with the 'Meat Hawk.'

Corvus americanus.—An abundant resident and very tame. I have often approached within a few feet of them while feeding. As there are no crops to be damaged, the inhabitants protect them for their services as scavengers.

Molothrus ater.—Rare migrant, seen occasionally during September in scattered flocks.

Sturnella magna.—Rare visitant. I flushed four in a meadow near town July 12, 1889, but none were seen before or since.

Scolecophagus carolinus.—Saw a flock of about twenty at Early's farm Sept. 22, 1889. None observed in the other years.

Quiscalus quiscula æneus.—For four days in 1889, Sept. 11-14, these birds migrated through the island in abundance, but none were observed in 1890 or 1891.

Carpodacus purpureus.—Common summer resident. Frequents the evergreens where its loud and clear song may be heard morning and evening, and during the whole of cloudy days.

Loxia curvirostra minor.—Common summer resident. Probably breeds

early, as old and young were gathered into large flocks when we reached the island during the last week in June.

Loxia leucoptera.—Rare summer resident. I have frequently observed this species and once, July 9, 1890, I secured a specimen.

Spinus tristis.—Common summer resident.

Spinus pinus.—Not observed during 1889 or 1890, but fairly common in large scattered flocks July 27-29, 1891. Rather more shy than in winter.

Poocætes gramineus.—Common summer resident in the pastures at Early's farm. Not observed elsewhere. Departs for the south about the middle of September.

Zonotrichia leucophrys.—Rare migrant; one observed in the bushes Aug. 12, 1889.

Zonotrichia albicollis.—Abundant summer resident among the scattered evergreens. Last observed Sept. 2-5.

Spizella socialis.—Common summer resident. Found everywhere, but not in such abundance as farther south. Departs about Sept. 12.

Spizella pusilla.—Rather common summer resident in suitable localities. Departs Aug. 10-24.

Junco hyemalis.—Common summer resident.

Melospiza fasciata.—Common summer resident. Still present when I left.

Pipilo erythrophthalmus.—One pair was observed during the summer of 1890, but none were seen the other years.

Habia ludoviciana.—A young male was shot July 24, 1890, among the bushes near Early's farm. I examined an adult male said to have been collected on the north shore near St. Ignace.

Passerina cyanea.—In 1889 and 1891 a common summer resident, frequenting the scattered evergreens and bushes. In 1890 only a few were observed. Departs about the last week in August.

Piranga erythromelas.—Rare. A female of this species was shot in the oak woods Aug. 3, 1889, but a careful search failed to disclose a male. A male was observed July 17, 1891.

Progne subis.—Two pairs observed in 1889, four pairs in 1890, and nine pairs in 1891. Breeds about the Grand Hotel. Departs Aug. 7-20.

Petrochelidon lunifrons.—Rare in 1889, about a dozen being observed. Abundant migrant in 1890, becoming numerous Aug. 4, 5, and 6, and again Aug. 20 and 21. In 1891 they were quite common until July 29 when all disappeared.

Chelidon erythrogaster.—Abundant summer resident. Breeds under the wharves. The bulk departs about Aug. 5, but a few individuals are seen until Sept. 7-11.

Tachycineta bicolor.—Abundant summer resident. Breeds abundantly in boxes placed for that purpose. Straggles away anywhere between Aug. 7 and Sept. 3. This and the preceding occur in countless thousands, and when disturbed rise in clouds.

Clivicola riparia.—Two individuals of this species were observed July

10, 1889. In 1890 and 1891 they bred abundantly in a gravel pit near Early's farm, departing in the first week of August.

Stelgidopteryx serripennis.—I found one of this species dead in July, 1890, but never saw a living example although I searched diligently.

Ampelis cedrorum.—Common summer resident.

Vireo olivaceus.—Abundant summer resident in maple woods and bushes. Departs Sept. 2-6.

Vireo philadelphicus.—I shot a female of this species Aug. 6, 1889, in a raspberry patch, the fruit of which it was eating. I secured an immature specimen Aug. 7, 1890, and observed two adults Sept. 6, 1890, one of which I secured.

Vireo gilvus.—Not a common summer resident. Departs Aug. 6-10.

Vireo flavifrons.—One specimen Aug. 5, 1891.

Vireo solitarius.—One taken by T. G. White in August, 1891. I have not the exact date at hand.

Mniotilta varia.—Not a common summer resident but an abundant migrant. Found during summer in the evergreens on the steep bluffs. First migrants arrive Aug. 7-10; common by Aug. 26; last seen Sept. 2-6.

Helminthophila pinus.—On Sunday, July 1, 1889, I saw a fine male of this species in an evergreen tree. He permitted the closest scrutiny, sometimes approaching within a few feet of my head in his search for food. I could not find him again the next day.

Helminthophila chrysoptera.—Not present in 1889 and 1890. In 1891 a number were constantly observed in the bushes until July 26.

Helminthophila ruficapilla.—Rare summer resident and common migrant. In summer found among the evergreens; during migrations, among the bushes. The first migrants straggle along about Aug. 10; the bulk arrives in a body about Aug. 25-Sept. 5, and all disappear within a day or two.

Helminthophila peregrina.—Common migrant. Found in bushes and evergreens, rarely in the open woods. Arrives Aug. 6-24; bulk arrives inside of a week; and all leave in a few days, Aug. 28-Sept. 6.

Compsothlypis americana.—Abundant migrant in low bushes and maple woods. First seen Aug. 22-Sept. 1; the bulk arrives almost immediately; and all depart soon, Sept. 5-6.

Dendroica tigrina.—Not uncommon migrant in 1890 and 1891. First seen Aug. 30; departs Sept. 6.

Dendroica æstiva.—Abundant summer resident. Breeds in the evergreens. At first very common; every day sees a diminution of their numbers, until by Aug. 10-12 the last have departed.

Dendroica cærulescens.—In 1889 this species was observed only as a common migrant, but in the succeeding years I found it a not uncommon summer resident. In summer it inhabits the maple woods, but in migration it frequents the evergreens. First seen, in 1889, August 15. Becomes common Aug. 9-21, and departs about the middle of September.

Dendroica coronata.—In 1889 one female was shot July 13, after which the species was not observed until the migration. In 1890 and 1891 they

were rather common during the summer in the high evergreens. The summer residents departed in a body Aug. 1, 1890, and under the date of Aug. 7 Dr. Gibbs wrote from Kalamazoo that the first Myrtle Warblers had arrived. No migrants from the north had yet reached Mackinac. Bulk arrives about the middle of August, and all depart the first week in September.

Dendroica maculosa.—Found abundantly in the bushes where it is the characteristic summer bird. Departs Sept. 6–11. I detected seven distinct songs of this species, no one of which is even a variation of the other.

1. Three notes followed by one lower: *che-weech che-weech che-ó*.

2. Three sharp clear whistles with a strong *r* sound, then a warble of three notes, the middle the highest, the latter clear cut and decisive: *pra pra pra r-é-oo*.

3. Two quick sharp notes followed by a warble of three notes, the middle the highest: the warble is soft and slurred: *prút prút purreao*.

4. A soft falsetto warble, different in tone from any other bird song: *purra-ü-whuy-a*.

5. Of the same falsetto tone, uttered rapidly: *prut-ut-ut-ut-ut*.

6. A harsh note like, in miniature, the cry of a Jay: *d kay kay kay*.

7. A harsh *k-e-e-dl*, the last syllable higher by a shade, quick, and subordinated to the first part. The alarm note is a sharp *zeek*.

Dendroica pensylvanica.—Rare summer resident and common migrant. Becomes common the middle of August, and departs the second week in September.

Dendroica castanea.—Rare summer resident and abundant migrant. Found principally among the bushes. Bulk arrives Aug. 28–Sept. 3. Departs the middle of the month.

Dendroica striata.—Rare summer resident and abundant migrant. Found with *D. castanea*; dates of arrival about the same.

Dendroica blackburniæ.—Observed during 1889 only as a very common migrant frequenting maple woods, during its stay. First seen, in 1889, on Aug. 8, on which date it became common. In 1890 and 1891 it was a rather common summer resident among the evergreens. Bulk arrives July 30–Aug. 8; departs Aug. 31–Sept. 6.

Dendroica virens.—Abundant summer resident, found principally among the evergreens, though many were observed in the deciduous woods. Departs in the middle of September.

Dendroica vigorsii.—Rare. In 1889 three were seen on Aug. 14; in 1890 I heard a few sing during the first part of July. A few migrants also were observed at wide intervals.

Dendroica palmarum.—Common migrant; arrives late. Found in open fields and on the edges of bushy tracts.

Dendroica discolor.—Common migrant in bushy country. I took many specimens. Arrives Aug. 10–15; departs Sept. 2–6.

Seiurus aurocapillus.—Common in the maple woods. On several occasions it has been my good fortune to hear the beautiful vesper song of this species. Departs Aug. 17–Sept. 6, a wide difference.

Geothlypis agilis.—I took two specimens, both in the bushes, one Aug. 30, 1889, the other Aug. 30, 1890.

Geothlypis philadelphia.—My brother, T. G. White, shot several of this species in the latter part of August, 1890. Very rare.

Geothlypis trichas.—Not a common summer resident. None observed in 1889. Departs Aug. 23-26.

Sylvania pusilla.—Rare migrant in 1889, a flock of seven Aug. 26 and one female Aug. 30. In 1890 and 1891 a very abundant migrant. Found in new growths and small evergreens. First seen Aug. 25-28; the bulk arrived Aug. 26-Sept. 1; and a few were still present when I left.

Sylvania canadensis.—In 1889 a rare summer resident and common migrant. In 1890 and 1891 a very common summer resident, its loud song being heard in every patch of evergreens. The young birds left the nests July 2-8. It was still present when we left the island.

Setophaga ruticilla.—The most characteristic bird of the island. It occurs in such amazing abundance that it seems as if every tree contained one of these birds. Still present when I left.

Harporhynchus rufus.—Not a common summer resident. A few were found near the town and in the hedge-rows at Early's farm. Departs the first week in August.

Troglodytes ædon.—In 1889 but two pairs bred at Early's, but the other years they bred commonly about the cottages. Very common as migrants, foraging about in the maple woods in large bands. Bulk arrived Aug. 2-5; departed Aug. 16-24.

Troglodytes hiemalis.—Very common summer resident. I find it impossible to give dates of abundance and departure, because after the song season these birds are very hard to discover.

Certhia familiaris americana.—Rare. Two were observed Aug. 3, 1889.

Sitta carolinensis.—This species was very rare on the island. One was observed Aug. 3, 1889, and one July 2, 1890.

Sitta canadensis.—Common summer resident and abundant migrant. Found everywhere, but more especially in the low pines. First migrants Aug. 2-10. Still present when I left.

Parus atricapillus.—Abundant resident. Found everywhere.

Regulus satrapa.—Common summer resident among the evergreens.

Regulus calendula.—A rare summer resident and a common and early migrant. I found a nest with four nearly fledged young July 20, 1889. The first migrants arrive July 23-Aug. 10, and the species departs in the middle of September.

Polioptila cærulea.—Rare. Shot one and saw another in mixed woods Sept. 22, 1889.

Turdus mustelinus.—Common summer resident in 1890 and 1891. Not present in 1889.

Turdus fuscescens.—Absent in 1889. Common among the bushes and scrub growths in the other years. Last seen Sept. 2 and 5.

Turdus aliciaë.—One specimen August 23, 1891.

Turdus ustulatus swainsonii.—Common summer resident, departing for the south Aug. 29-Sept. 4.

During the summer of 1891 some very interesting observations were made as to their song habits. The song of the Olive-backed Thrush begins low and ascends by two regular steps of two notes each, and ends with several sharp notes. The first note of each step is higher than the second, and the second of the next is about the same as the first note of the first step. Occasionally the whole is preceded by a sharp *chuck*. The notes have the swelling beauty of all Thrush songs, while the metallic ending rings like a little bell. The song always says to me,—*gurgle gurgle tling, che che che*. As far as my experience goes, this Thrush never sings steadily except in his chosen tree; in fact for two years one has selected for his perch a small evergreen near our cottage, and it was from him that I procured the following data.

He sings on an average nine and a half times a minute with extreme regularity. During the song periods of morning and evening his constancy of purpose is remarkable; except to seize a passing insect, he never breaks the regular recurrence of his song. From a series of records it is found that he begins on an average about 3.15 A. M., and sings steadily (of course I mean by that ten times a minute, not constantly) until about 9.00 A. M.; he is nearly silent until noon, after which he sings occasionally for a minute or so. About 4.30 he begins again, and only ceases to retire for the night about 7.30 P. M. This is a wonderful record, and were it not verified by long experience, I should myself be inclined to consider it exceptional. Allowing but eight times a minute for his songs, we have, for one day, the time consumed in song periods about eight hours and forty-five minutes, and in occasional song, at least twenty minutes, according to which there would be a total of 4,360 songs per day. His song ceased entirely about July 25, although for five days before that but half the time was employed. Certainly it would not be unfair to allow him at the very least six weeks of song, 42 days at 4000 per day, in all 168,000 songs in a season. The above facts have been many times verified.

Turdus aonalaschkæ pallasii.—A common summer resident, very entertaining on account of its delightful song. Departs Sept. 2-6.

Merula migratoria.—Common summer resident. Shy and a frequenter of the woods, rarely appearing in town.

Sialia sialis.—Rare summer resident and abundant migrant. The bulk arrives the middle of August, and departs the middle of September.

Passer domesticus.—Not one was to be found on the island in 1889 when I first arrived, but within a few weeks about twenty came over with the boat from Mackinaw City. These have increased and now they are quite common.

Besides the above which occur on Mackinac Island proper, I observed the following on the mainland immediately adjacent:—

Bonasa umbellus (subspecies?).—Common on both shores of mainland.

Bubo virginianus.—One seen on north shore Sept. 3, 1890.

Corvus corax principalis.—Common on north shore.

Melospiza gregiana.—Very common on north shore.